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AUTHOR	Germeroth, Stephen R.
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ABSTRACT

Health educators are described as having the primary teaching objectives of (1) reduction of premature death rates; (2) reduction of incidences of serious disabling diseases; and (3) promotion of intelligent, self-directed health behavior. Stress is examined as a major factor in ill-health among today's youth, and a rationale is presented for health education in stress. A course of study on stress and tension, designed to educate a community college class in living a more relaxed lifestyle, is described. Major components of the classroom instruction are suggested: (1) motivation lectures; (2) values clarification tasks; (3) progressive muscle relaxation; and (4) feedback. (MJB)

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WHY TEACH STRESS MANAGEMENT AND TENSION CONTROL?

As is the case for most health science educators, over the years I have asked myself and my colleagues, "What's it all about? What are we doing? For that matter, what are we supposed to be doing?" Obviously I am not alone. As you know, over half the Jan-Feb 1978 journal, Health Education was devoted to asking that same question. Certainly, the major thrust of the national conference is to fill this philosophic void. I do not pretend to have the answer - but I do have an opinion; a position. Through many trials and at least as many errors, I have concluded that we, as a concerned profession, have as primary objectives the reduction of pre-mature death rates and the incidence of serious, disabling disease. Even more importantly, teaching toward intelligent, self-directed health behavior promotes among students a desired life style, vastly superior to that possible among the uninformed or the non-motivated. To enhance each student's effort to experience that life style is my task.

Personally, I agree with Dr. John Travis, Director of the California based Wellness Clinic, when he suggests, "People must learn to be responsible for their own health." We are past the time when it was enough to deal with symptoms and therapies for crisis problems. In fact, we may have already reached the point where no matter what amount we spend for medical research and technology, progress as measured in lives saved and lives lengthened will be ridiculously small.

Dr. John Knowles, President of the Rockefeller Foundation says it this way, "The next major advances in health will come from the assumption of individual responsibility for one's own health and a necessary change in the life style of a majority of Americans."

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We health educators are only too aware of how difficult the task of modifying life long behavior; behavior which is more often than not, as Dunn suggests, "moving us steadily away from high levels of wellness and toward illness." But we try; valiantly analyzing dietary behavior, examining exercise levels, computing body composition, describing cardiovascular risk, exposing tendencies to misuse and abuse substances and even discussing the pros and cons of birth control technology. All of these behaviors are important as they impact on the whole person and need to be considered in a comprehensive health study. But what about stress and its product tension? How many health science educators neglect to teach toward stress management and tension control?

Dr. Johann Stoyva, research scientist at the University of Colorado Medical Center in Denver, proclaims with others, that "epidemiological data for western countries show that disease patterns have shifted remarkably over the past century and a half; in essence a change from communicable diseases to stress related and degenerative disorders." This is a point of utmost significance for health care within our society, yet its recognition is slow in coming. Stoyva goes on to say that "traditional medicine which embodied only the doctrine of specific etiology is simply not enough; diseases now prevalent make necessary another approach."

Herein lies my rationale for teaching Stress Management and Tension Control to students of health. I am convinced that the inability to deal effectively with stress, that is manage it, elicits all kinds of coping behavior that we recognize as self-destructive and illness causing. We observe the up-tight, nervous student misusing substances; everything from aspirin for perceived pain to excessive caffeine, nicotine and

ethanol (coffee, cigarettes and booze). He overeats, especially high sugared junk food, and he is under exercised ("I'm too tired."). It's no wonder he's overweight. He proceeds, day by day, week by week, year after year, repeating behaviors learned long before that seemed to help him deal with the stressors of life; most of these behaviors wholely in conflict with levels of wellness. Doctors, the 'auto mechanics of the human vehicle' meet our typical subject increasingly earlier in life, complaining of sleep on-set problems, obesity, angina, constipation (or chronic diarrhea), tension headaches, fatigue, colitis, hypertension and a thousand aches and pains that will never be seen on any x-ray. Too often our friend dies very early in life.

I have the feeling I've told you nothing new. Most everyone here can see what's happening. The question is, what can be done? For the remainder of my time today, I'd like to describe a proposed course of action to deal with stress and tension problems through the vehicle of education.

Three years ago, I designed a course of study for an experimental section at Catonsville Community College in Baltimore County; its focus was stress and tension. The basic philosophy of the course has not changed since then, although many revisions have been made to content and methods. The central objective remains, <u>to help students live a more relaxed life style</u>. The benefits derived from this one modification are innumerable.

The classic learning model was used to design the process. It is assumed for learning to take place; the student must have certain understanding, that is possess knowledge relevant to the task. The student must be trained in skills necessary for the task. The student must practice the skills to develop mastery. The student must be able to

apply the knowledge and skills in situations that require their use.

With this in mind, the course, as described in your handout, with specific cognitive and performance skills was evolved.

Two meeting arrangements have been used; one section meets 3 times per week for 50 minutes each meeting. Other sections meet once per week for 2½ hours. I believe the better arrangement for learning is one-hour meetings every other day. The intensive sections are designed for scheduling and student convenience.

The semester's class time is devoted to 1/3 cognitive tasks and 2/3 performance training. Students are asked to commit themselves to the goals of the course at the outset. If they honestly feel they cannot make that pledge, they are invited to withdraw from the course. Anything less than a true effort will produce little if any benefit - in essence a waste of time.

The commitment I require is this:

I am willing to practice - 1 hour per day

I am willing to read - all assignments

I am willing to attend - every class

My experience has been that students who remain in the course therefore,agree to their commitment,do remarkably well as measured by increased knowledge, increased skill, increased ability and tendency to relax in the scientific sense and an improved, that is, reduced and controlled EMG value for the frontalis. Without fail, students who complete the course are impressed with their own success. And it is theirs. They have learned. They have practiced and applied what they found to be effective.

To my thinking, there are four major components in a model program designed to help students live a more relaxed life style. Although this

model may be useful in other populations, it was admittedly designed for young adults and older students presented in a typical collegiate setting.

The first component consists of a series of lectures intended to inform and motivate.

Topics of importance include:

-A brief history of stress research and findings over the years.

-A description of the general need to study stress and practice relaxation.

-A description of stress-related illness.

-An examination of how substances in our environment, including food, may impact on stress levels.

-An examination of how the lack of adequate exercise increases stress response.

-An analysis of the psycho-physiological involvement of stress in humans.

-A comparison of currently proposed methodologies to deal with stress and tension.

-A description of how conflict, anxiety, frustration and aggression affect stress levels.

-A description of the relevant work of Cannon, Selye and Stoyva.

-A presentation and discussion of 'common sense' ways of dealing with stress.

The second component consists of four hours of values clarification tasks, directed by personnel from the college counseling staff.

It is my opinion that physical relaxation without an understanding of what drives us, often at blurring speeds and confusion, does little to reduce stress and tension levels.* The values component is designed to help students put priorities in order, to resolve conflict, to become one's own director. In this way we begin to manage stress more effectively. We cannot escape stress; we probably don't want to. Managed stress is fun and exciting; the highs of the day. It's stress gone wrong, distress, we wish to control. The component of values clarification has been very well received with many students often finding their way into improved communication with specific counselors.

The third component of this model concerns PMR Technique. That is, Progressive Muscle Relaxation; developed by Dr. Edmund Jacobson, Director, Laboratory for Clinical Physiology - located in Chicago, Illinois. Dr. Jacobson first published his ideas concerning the need to relax scientifically in 1908. Later he published numerous articles and books dealing with the topic. The two best known are Progressive Relaxation, written for the physician and You Must Relax, written for the layman. The latter, in its fifth edition, is a core text of this course. The Jacobson technique is simple, clearly a teachable skill and most importantly, it works. No other technique to relieve tension, that is contracted muscle, can provide the volume of scientifically sound, well conducted and impressively positive data which PMR has developed over seventy years.

The purpose of the skill training sessions is to teach each participant how to properly practice each skill and what to look for. Each

*/Research does indicate however, according to Borkovec, that excessive arousal levels impede cognitive processes./

movement, ultimately covering some 1,030 muscles, clearly illustrates the difference in feeling one has when a muscle group is tense or relaxed. The specific objective is to develop an auto-sensory perception of this phenomenon, often referred to as the Muscle Sense of Bell. The student of PMR practices each group as presented during the time he has set aside for our work. As he becomes more skilled in recognizing when and where tension exists, he proceeds to control it by turning it off. The practice and skill proceeds progressively as the student learns to:

1. Just relax at all (any level)
2. Relax in a no-stress situation
3. Relax in a mild-stress situation
4. Relax in a great-stress situation
5. His customary behavior is to be relaxed

Clearly we are tackling a difficult task. We are attempting to unlearn a lifetime of learned tensing behaviors (bracing) in favor of an alien habit, to relax. We are dealing with the whole individual, focusing on a life style which exemplifies hurry, anxiety, confusion and complexity. Also, we are tampering with the basics of diet, exercise, priorities and values.

How successful in this effort and by what is success measured? Actually, an important part of the answer to both questions involves the fourth component of this model. I believe that effective feedback in many forms, from teacher to student and student to teacher, is essential to the success of each individual. The most dramatic feedback tool I use is the EMG (electro-myograph). It is used only as an appraisal device, first establishing mean pre-treatment frontalis values, then

monitoring progress throughout the treatment (training) period, and finally it is used to determine average post-treatment values to compare with pre-scores. Almost without exception I am able to demonstrate to students evidence of reduced frontalis tension (in uV) coinciding with their auto-sensory perception of being relaxed. This reinforcement is immensely supportive.

Less dramatic but equally as important are individual conferences. Students understand that this course provides one hour per week, arranged for either EMG appraisal or conference. I believe a great deal of support is given to students during these meetings. Often, very close and rewarding relationships grow out of our exchanges.

Other feedback include a daily diary completed and returned each week, a semester's-end personal evaluation of progress, and of course, the ever present telephone. No more powerful educational device exists than the accessibility of students to their instructor, hopefully a credible model for their goals and needs.

Besides the obvious objective means to measure success, that is test scores, I am very often impressed by the unsolicited testimonies given by students. Some of these I'll share with you momentarily.

You may be interested to know that this model is currently being studied to see if it is, in fact, a reliable method for achieving the central objective. A comparison of STAI (State-Trait Anxiety Inventory) scores, EMG levels, QPA records and Wellness Inventory responses will be made pre and post treatment to determine if change has taken place. My experience has been that the data will support the model.

Findings of the Fall 1977 study group are encouraging. Of 60 subjects originally enrolled in the program, 53 were pre-tested. Of those

53, pre vs. post treatment EMG data was collected for 38 individuals (72%). Twelve (12) of the 38 (32%) demonstrated a significantly (.05 level) reduced EMG frontalis uV after treatment. However, 36 subjects (95%) were reporting lower average EMG values post treatment when compared to pre treatment. This occurred even though our EMG lab was re-located just prior to post treatment testing. Other comparative data is not yet available.

The need to teach stress management and tension control is apparent. It is time to attack the problem of the way we live. Therefore I would propose the following recommendations.

I would like to call for physical educators and health educators to consider teaching scientific relaxation to their classes. We spend most of our time teaching tension (contracting) behaviors. Why not set aside some time to help these people relax? The younger - the better. There are many model programs for relaxation training in physical education, often involving gaming techniques. The American Association for the Advancement of Tension Control has a data bank wherein that information can be obtained. I invite you to join the AAATC and use their facilities.

In this hurried, often misdirected world, we need to "stop and smell the roses." Edmond Jacobson said it this way, "You Must Relax!"